

U.S. Patent Application Serial No. **10/589,439**
Amendment filed December 8, 2009
Reply to OA dated September 30, 2009

REMARKS

Claims 1-16 are pending in this application, with claims 10-16 withdrawn from consideration. Claims 10-16 are canceled without prejudice or disclaimer. Upon entry of this amendment, claims 1-9 will be pending. Entry of this amendment and reconsideration of the rejections are respectfully requested.

No new matter has been introduced by this Amendment.

Summary of Interview of October 21, 2009

Applicant's agent, Daniel Geselowitz, initiated a telephone interview with Examiner Harris on October 21, 2009. Applicant requested clarification of the objection to the drawings in paragraph no. 2 of the Office action. During the interview, the Examiner explained that the term "length perspective" in the rejection referred to the scale bars in the Figures, and he believed that Fig. 2 did not have a scale bar. Applicant's agent pointed out that a scale bar is present in Fig. 2, and the Examiner then indicated that Fig. 2 was acceptable and that the objection would be withdrawn.

The drawings are objected to because they all fail to show a length perspective as described in the specification. (Office action paragraph no. 2)

Withdrawal of the objection is respectfully requested. As discussed above, Applicant's agent conducted a telephone interview with Examiner Harris regarding this objection, in which it was

U.S. Patent Application Serial No. **10/589,439**
Amendment filed December 8, 2009
Reply to OA dated September 30, 2009

clarified that the Examiner had not seen the scale bar in Fig. 2. Since a scale bar is present in Fig. 2, the Examiner agreed that the objection would be withdrawn.

Claims 1, 2, 5, & 8-9 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Takeyama US 2006/0050359 A1. (Office action paragraph no. 3)

The rejection of claims 1, 2, 5 and 8-9 is respectfully traversed, and reconsideration is requested.

In traversing the rejection, Applicant asserts the claim for foreign priority in this application. In this regard, Applicant notes, first of all, that Takeyama US 2006/0050359 is **not** prior art under 35 U.S.C. 102(b) for the present application, which has an effective US filing date of February 14, 2005. The prior art status of Takeyama US 2006/0050359 is reviewed as follows.

Takeyama '359 was published on **March 9, 2006**, and its 371(c)(1)(2)(4) date is **May 25, 2005** (see US 7,397,594, which matured from the same application). The PCT application of Takeyama (PCT/JP03/14453) was published as WO2004/049052 on **June 10, 2004**, and can serve as prior art under 35 U.S.C. 102(a). The PCT application of Takeyama (PCT/JP03/14453, filed **November 13, 2003**) is **not** prior art under 35 U.S.C. 102(e) because it was not published under article 21(2) **in the English language**; the publication was **in Japanese**. Applicant also notes that

U.S. Patent Application Serial No. **10/589,439**
Amendment filed December 8, 2009
Reply to OA dated September 30, 2009

the publication of Takeyama's priority application, JP2002-345359, was as JP Unexamined Patent Publication 2004-177755, on **June 24, 2004**.

Therefore, the earliest prior art date for the Takeyama reference is the 35 U.S.C. 102(a) date of WO2004/049052 on **June 10, 2004**. This is not prior art under 102(b) for the present application, which has an effective US filing date of **February 14, 2005** (international application filing date). The Takeyama reference is herein overcome by the claim for foreign priority in the present application to Japanese application JP2004-041335, filed on **February 18, 2004**.

The claim for foreign priority is perfected by the attached verified translation of priority application JP2004-0401335. Applicant submits that claim 1 of the present application is supported by claim 1 of JP2004-0401335, claim 2 is supported by claims 2-4 of the priority application, claim 3 is supported by claim 5 of the priority application, claim 5 is supported by claim 13 of the priority application and claim 9 is supported by claim 11 of the priority application.

In addition to the assertion of the claim for foreign priority, Applicant further submits that the present claims are not obvious over the disclosure of Takeyama '359.

The Examiner cites Takeyama '359 at paragraphs [0020] and [0080] as disclosing "a polymer solid electrolyte (organic-inorganic that would include nanofibers) and silica covering said crystalline polymer filament (in the form of a colorant)." The Examiner states that the polymer may be polyethyleneimine (paragraph [0042]).

However, Applicant submits that Takeyama '359 discloses a display element including electrodes (a) and (b), and (c) a solid polymer electrolyte layer containing a colorant and metal ions;

U.S. Patent Application Serial No. **10/589,439**
Amendment filed December 8, 2009
Reply to OA dated September 30, 2009

the Examiner is citing this solid polymer electrolyte layer in the rejection. The display element functions by color change due to an electrochemical redox reaction. However, Applicant submits that there is no disclosure of a nanofiber (or any fiber) structure in the reference. The solid polymer electrolyte is illustrated as a flat layer between the electrodes.

In this regard, the Examiner cites paragraph [0080] of the reference as disclosing “silica **covering** a crystalline polymer **filament**” (emphasis added).

However, first of all, **there is no “filament.”** The polymer is in the form of a **layer** (polymer solid electrolyte layer 14; see [0078]).

Moreover, **the colorant is not “covering” the solid electrolyte layer.** Paragraph [0080] discloses that the solid electrolyte layer can have a colorant, and that this may be one of several materials including silica. Paragraph [0081] discloses “the mixing ratio of this colorant in the case of using inorganic particles ...” and states: “This is because inorganic white particles such as titanium oxide are not soluble but only **dispersed in a polymer**” (emphasis added). That is, the colorant (which may be silica) is **dispersed in the polymer**, and is not “covering” the polymer.

Therefore, the disclosure of JP '359 is completely different in structure from that of the present claims. In particular, there is no disclosure of a fiber and the polymer is not in the shape of a filament. Moreover, there is no covering of silica on the polymer in the reference.

In addition, on page 4, line 7, of the Office Action, the Examiner argues that the claims are obvious based on an assumption that Takeyama '359 utilizes a sol-gel process to obtain an organic-

inorganic crystalline polymer, and that when the colorant is used together with the polymer, the colorant will necessarily cover the polymer.

However, Applicant submits that Takeyama '359 fails to describe that an organic-inorganic crystalline polymer is obtained by utilizing a sol-gel process.

Specifically, in Takeyama '359, a metal alkoxide is used as a surface treatment agent for making the colorant surface hydrophobic (see paragraph [0083]), and the metal alkoxide and the polymer are not used simultaneously. Takeyama '359 describes that the colorant is made hydrophobic by the surface treatment since dispersibility at the time of preparing a composition (a polymer solid electrolyte layer forming composition) is improved, or coagulation of the colorants to each other after the polymer solid electrolyte layer has been formed is prevented (see paragraph [0082]). However, Takeyama '359 does not disclose that a metal alkoxide is used in order to cover the polymer.

As noted above, the colorant of Takeyama '359 is dispersed as particles in the solid electrolyte layer. Please also note that paragraph [0103] of Takeyama '359 describes that "white particles as a colorant are further dispersed therein" (i.e., in polymer solid electrolyte layer 14). This portion of the reference discloses that polymer solid electrolyte layer 14 is formed by coating this polymer solid electrolyte forming composition on transparent support 11. From this description, it is clear that the polymer is merely applied and is present as a dry film, but never forms an aggregate of crystalline polymer filaments.

U.S. Patent Application Serial No. **10/589,439**
Amendment filed December 8, 2009
Reply to OA dated September 30, 2009

In view of Applicant's assertion of the claim for foreign priority and arguments that Takeyama '359 does not disclose or suggest the limitations of the present claims, Applicant submits that claims 1, 2, 5, and 8-9 are not anticipated by or obvious over Takeyama US 2006/0050359 A1.

Claims 3, 6 & 7 are rejected under 35 U.S.C. §103(a) as obvious over Takeyama US 2006/0050359 A1. (Office action paragraph no. 4)

The rejection of claims 3, 6, and 7 is respectfully traversed and reconsideration is requested.

As noted above, Applicant has asserted the claim for foreign priority in this application, and claim 3 is clearly fully supported by the priority document. In addition, Applicant has argued that Takeyama '359 does not disclose or suggest the limitations of base claim 1, and those arguments are applicable to claims 3, 6 and 7.

In addition, the Examiner cites Takeyama with regard to claim 7 as disclosing that the mean particle diameter of the colorant is 0.1 to 1 micron. However, this is the particle diameter of **particles mixed in the polymer**, while claim 7 recites the diameter of the polymer filament. There is no relationship between this disclosure of Takeyama and the limitation of claim 7.

Claims 3, 6 and 7 are therefore not obvious over Takeyama '359.

Claim 5 is rejected under 35 U.S.C. §103(a) as obvious over Takeyama US 2006/0050359 A1 in view of Andre et al. US 6,984,451. (Office action paragraph no. 5)

The rejection of claim 5 is respectfully traversed and reconsideration is requested.

U.S. Patent Application Serial No. **10/589,439**
Amendment filed December 8, 2009
Reply to OA dated September 30, 2009

As noted above, Applicant has asserted the claim for foreign priority in this application, and claim 5 is fully supported by the priority document. In addition, Applicant has argued that Takeyama '359 does not disclose or suggest the limitations of base claim 1, and those arguments are applicable to claim 5.

In addition, in the rejection, the Examiner states that "it would have been obvious to increase the amount of silica ..." in Takeyama. However, as noted above, the silica in Takeyama is dispersed in the polymer, and is not covering the polymer, and this argument is irrelevant to claim 5.

Claim 5 is therefore not obvious over Takeyama '359, taken separately or in combination.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

U.S. Patent Application Serial No. **10/589,439**
Amendment filed December 8, 2009
Reply to OA dated September 30, 2009

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

KRATZ, QUINTOS & HANSON, LLP


Daniel A. Geselowitz, Ph.D.

Agent for Applicants
Reg. No. 42,573

DAG/xl

Atty. Docket No. **060609**
Suite 400
1420 K Street, N.W.
Washington, D.C. 20005
(202) 659-2930



23850

PATENT & TRADEMARK OFFICE

Enclosure: Verified English Translation of Priority Application (JP 2004-041335)

H:\060\060609\Amendment in re OA of 09-30-09.wpd